single badly constructed sentence is noticeable. Unfortunately, the same can not be said about the author's use of specific words. He speaks about easterly wind currents when he means a westerly wind. Winds, like people, are named after the country or region from which they come and not after the region where they are going. One should not speak about foot pedals any more than one speaks about hand handles. Discovery means something else than invention, although both terms are frequently confused. Last, not least, according to the Oxford dictionary, the one who makes an exhibit (or demonstrates his merchandise) should be called an exhibitor. The word used by Milbank has a rather bad connotation and should not be used about balloons. The illustrations of the book are very interesting and very beautifully printed. This is quite an achievement, since most of them are taken from old books which are always difficult to reproduce. The pictures are printed on special paper. This has restricted their introduction into the book to every sixteenth page, sometimes far away from the text to which they belong. It would therefore be desirable if in a future edition a reference to the text were given with the pictures and/or a reference to the pictures were given in the text.

It would be unfair for the reviewer to pick on certain omissions which one might find in the book. The author is still gathering material and in the introduction he himself hints at the need of a new edition and we hope very much that Milbank will one day find the time to produce a new and enlarged edition. This will be very welcome to all who are interested in the conquest of the atmosphere. The author has done an admirable work in collecting and coordinating material very difficult to get and we all owe him a cordial welcome and sincere thanks.

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PROTEIN CHEMISTRY

Advances in Protein Chemistry. Edited by M. L. ANSON and J. T. EDSALL. Volume I. xi + 341 pp. New York: Academic Press. 1944. $5.50.

THE intimate participation of proteins in the activity of living matter makes the acquisition of knowledge concerning their chemical structure and properties a necessary prerequisite for the understanding of the chemical basis of biological phenomena. Unfortunately, in attempting to secure this knowledge, the protein chemist has been confronted by formidable experimental difficulties. The fact that proteins represent organic molecules of such size and such complexity as to the arrangement of the amino acid residues, precludes the application of most of the known techniques developed in organic chemistry for the elucidation of the chemical structure of simpler molecules. For this reason, the ingenuity of the experimenter has been put to the test most severely to find new lines of attack on the protein problem. These efforts have resulted, in recent years, in the application, to the study of proteins, of a variety of physical techniques such as electrophoresis, sedimentation and x-ray analysis. Notable progress also has been made in the development of methods for the determination of the amino acid composition of proteins. While these new lines of attack have not yielded a solution of the fundamental questions of protein structure, much valuable knowledge has been gained and the way has been prepared for future progress.

In inaugurating the series of volumes on "Advances in Protein Chemistry," Anson and Edsall have set themselves the laudable aim of making available to the chemist and biologist the data on proteins obtained by means of the newer experimental techniques. They also intend to provide "the opportunity to workers in special subjects to present their views in more organized form than is possible in the regular journals, and also to express their personal judgment on problems which are unsettled." The editors express the hope that "as the reviews accumulate, they will provide a useful and comprehensive picture of the changing and growing field of protein chemistry and a stimulus to its further development."

In the selection of papers for the first volume of the series, special emphasis was placed on the role of proteins as components of biological systems. The volume contains eight review articles: "Lipoproteins," by Erwin Chargaff; "Structural Proteins of Cells and Tissues," by Francis O. Schmitt; "Some Contributions of Immunology to the Study of Proteins," by Henry P. Treffers; "The Interaction between the Alkali Earth Cations, Particularly Calcium, and Proteins," by David M. Greenberg; "The Purification and Properties of Certain Protein Hormones," by Bacon F. Chow; "Soybean Protein in Human Nutrition," by Donald S. Payne and L. S. Stuart; "Nucleoproteins," by Jesse P. Greenstein; and "The Proteins of Skeletal Muscle," by Kenneth Bailey.

These contributions are both factual and critical in character and can not fail to stimulate thought and discussion. The comprehensive bibliographies which are provided at the close of each article are most valuable. Indeed, the high caliber of the papers in this first volume of "Advances in Protein Chemistry" gives promise that the series will become a useful addition to the library of everyone interested in the nature and function of proteins.

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